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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,316

04/22/2005

Isao Ota

123547

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10/17/2007

OLIFF & BERRIDGE, PLC

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EXAMINER

ABU ALI, SHUANGYI

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

10/17/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/532,316

Applicant(s)

OTA ET AL.

Examiner

Shuangyi Abu-Ali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 is/are allowed.
- 6) ☒ Claim(s) 5-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/03/2005</u>  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

(1)

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 7- 9 are rejected under 35 U.S.C. 103(a) as obvious over JP 07-081932 to Matsukura.

Regarding claims 7, 9, and 11, Matsukura discloses a method of making ceria particles by heating cerium carbonate hydrate in a humidity environment and followed by conducting calcinations at a temperature of 300-500 °C (abstract).

The references differ from Applicant's recitations of claims by not disclosing identical ranges. However, the reference discloses "overlapping" ranges, and

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overlapping ranges have been held to establish prima facie obviousness (MPEP 2144.05).

Regarding claim 8, Matsukura discloses that the humidity is 80% (abstract).

(2)

Claims 5-6, 12-14 are rejected under 35 U.S.C. 103(a) as obvious over JP 07-081932 to Matsukura and/or WO00/73211 to Matsuzawa et al.

This rejection is over the WO 00/73211 A1 because the reference qualifies as prior art under 35 U.S.C. 102 (b). However, for convenience, the paragraph and line numbers of the English language equivalent U. S. Patent No. 6,615,499 will be cited below.

It is noted that claims 5-6, 12-14 are product-by-process claims. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 77 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted).

Regarding claims 5-6 and 12-14, Matsukura discloses a method of making cerium oxide suitable for abrasive by heating cerium carbonate in a humidified environment and followed by calcinations (abstract). Matsuzawa et al. also disclose a method of making ceria particles by heating and calcinations process (abstract). The ceria are useful for semiconductor polishing and silica film polishing.

Although Matsukura and Matsuzawa et al are silent about the specific measurement used to determine the ceria particles as applicant set forth in claims 5-6 and 12-14. However, the ceria particles of Matsukura and/or Matsuzawa et al are made by a process substantially identical with the process for making particles in the instant claims. It is reasonably expected that particles of Matsukura and/or Matsuzawa et al are similar to that of the instant claims. If they are any difference, the difference must be minor and obvious. The burden is shifted to applicants to show the particle is different. Otherwise a prima facial case of anticipation, or in the alternative, of obviousness has been established.

(3)

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 9 is rejected under 35 U.S.C. 103(a) as obvious over JP 07-081932 to Matsukura, in view of WO00/73211 to Matsuzawa et al.

Regarding claim 9, Matsukura discloses a process of making ceria particles by supplying humidified gas at a temperature of 100 °C (abstract), as applicant set forth in claim 7, but they are silent about the limitation as applicant set forth in claim 9.

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However, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to supplied the humidified gas until the temperature of 200 °C – 350 °C as applicant set forth in claim 10, motivated by the fact that Matsuzawa et al, also drawn to making ceria particles suitable for polishing, disclose that raising temperature from heating to calcinations while supplying oxygen gas or like will produce ceria particles suitable for polishing silica without causing scratches( col. 1, lines 60-61).

(4)

***Allowable Subject Matter***

Claims 1-4 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: the prior art ether silent about the temperature is raised at a slow speed of 2-60 °C/hour.

(5)

***Conclusion***

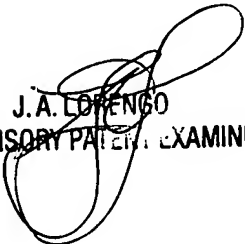
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shuangyi Abu-Ali whose telephone number is 571-272-6453. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SA

  
J.A. LORENZO  
SUPERVISORY PATENT EXAMINER